

REMARKS

Claims remaining in the present application are Claims 1-16 and 27-37. Claims 1-6, 10-16, 28, and 30-32 have been amended. No new matter has been added as a result of these amendments.

EXAMINER INTERVIEW SUMMARY

On December 11, 2003, the Applicants conducted a telephonic interview with the Examiner and his supervisor. Applicants appreciate the granting of this interview. Applicants discussed Claim 1 with respect to Zizzo (Pub. No. U.S. 2002/0188910 A1) (hereinafter, Zizzo). Proposed amendments to Claim 1 were also discussed. No definitive agreements were reached.

CLAIM REJECTIONS

35 U.S.C. 102(e)

The rejection states that Claims 1, 3-9, and 27-28, 30-35, and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by Zizzo. Applicants assume that Claim 36 was inadvertently left out of this portion the rejection in that it comprises similar limitations as Claim 7. The rejection is respectfully traversed, for the reasons below. It is respectfully submitted that Claims 1, 3-9, and 27-28, and 30-37 are not anticipated or rendered obvious by Zizzo, for the reasons below.

Amended Independent Claim 1 recites, in part:

b) a computer program determining a valid position for said module in a graphical user interface, said graphical user interface having a plurality of resource icons representing said resources, said valid position based on characteristics of said module and characteristics of said resources, said determination made in response to a user request for said valid position for said module in said graphical user interface (emphasis added).

Claim 1 has been amended to clarify that the determining of the valid position is performed by a computer program. Claim 1 has also been amended to clarify that the request for the valid position is a user request.

Claim 1 recites “a computer program determining a valid position for said module in a graphical user interface, said graphical user interface having a plurality of resource icons representing said resources.” Claim 1 further recites that the “determination is made in response to a user request for said valid position for said module in said graphical user interface.”

Zizzo fails to teach or suggest “a computer program determining a valid position for a module in a graphical user interface,” as claimed. Zizzo at paragraph [0054] may disclose that the user is able to place and move IP cores within a SoC design by, for example, moving copying or dragging the symbol for the IP core onto a schematic. However, Applicants do not understand Zizzo to teach or suggest, “a computer program determining a valid position for said module in a graphical user interface,” as claimed.

Furthermore, Zizzo teaches away from this claimed limitation. Paragraph [0052] or Zizzo discloses that footprint configurations of the selected part are presented to allow the user to make more informed decisions about placement in the overall design. Thus, as Applicants understand Zizzo, the user must determine where to place the IP core in the overall design. In contrast, the claimed limitation recites a computer program determining a valid position for the (selected) module in the GUI. Thus, the designer is relieved of having to examine the footprint of the selected module to determine where to place the selected module.

For the foregoing rationale, it is respectfully submitted that Claim 1 is neither anticipated nor rendered obvious by Zizzo. As such, allowance of Claim 1 is earnestly solicited.

Claims 3-9 and 27 depend from Claim 1, which is believed to be allowable for the foregoing reasons. As such, it is respectfully submitted that Claims 3-9 are not anticipated nor rendered obvious by Zizzo. Allowance of Claims 3-9 and 27 is earnestly solicited.

Amended Independent Claim 28 recite, in part:

a computer program determining a valid position for said module in said GUI reflecting a valid position for said function in said device.

For at least the reasons discussed above in the response to Claim 1, amended Claim 28 is neither taught nor suggested by Zizzo. As such, allowance of Claim 28 is earnestly requested. Claims 30-37 depend from Claim 28, which is believed to be allowable for the foregoing reasons. As such, it is respectfully submitted that Claims 30-37 are not anticipated nor rendered obvious by Zizzo and their allowance is earnestly solicited.

35 U.S.C. 103(a)

Claims 2, 10-16, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zizzo in view of Comeau et al. (Pub. No. U.S. 2002/0099863) (hereinafter, Comeau). The rejection is respectfully traversed for the reasons below. It is respectfully submitted that Claims 2, 10-16, and 29 are not rendered obvious by Zizzo in view of Comeau, for the reasons presented below.

Amended Independent Claim 10 recites:

A computer readable medium having stored thereon program instructions for implementing a method for assisting circuit designing, said method comprising:

a) determining valid positions in a graphical user interface for user selected modules to be placed in said graphical user interface, said graphical user interface describing resources operable to implement said selected modules, said valid positions based on characteristics of said user selected modules and characteristics of said resources; and

b) generating at least two elements selected from the group consisting of: an application programming interface (API) for programming an operation of a first of said user selected modules, source code for realizing said user selected modules in said resources, an interrupt vector table having a call to an interrupt service routine for a first of said user selected modules, and a data sheet for a circuit comprising said user selected modules as positioned in said graphical user interface (emphasis added).

Claim 10 is directed to a computer readable medium having stored thereon program instructions for implementing a method for assisting circuit designing. Thus, one of ordinary skill of the art would interpret the claimed “determining” and the claimed “generating” as being computer implemented.

Claim 10 recites, “determining valid positions in a graphical user interface for selected modules to be placed in said graphical user interface.” For reasons discussed in the response to Claim 1, Zizzo fails to teach or suggest this claimed limitation. Comeau fails to remedy this deficiency. Therefore, neither Zizzo nor Comeau, alone or in combination, teach or suggest this claimed limitation. As such, Claim 10 is not rendered obvious over the cited combination.

Claim 10 further recites that at least two of the following elements are generated: 1) an application programming interface (API) for programming an operation of a first of said selected modules; 2) source code for realizing said selected modules in said resources; 3) an interrupt vector table having a call to an interrupt service routine for a first of said selected modules; and 4) a data sheet for a circuit comprising said selected modules as positioned in said graphical user interface.

Neither Zizzo nor Comeau teach or suggest, alone or in combination, an API application programming interface (API) for programming an operation of a first of said selected modules, an interrupt vector table having a call to an interrupt service routine for a first of said selected modules, or a data sheet for a circuit comprising said selected modules as positioned in said graphical user interface. Therefore, Claim 10 is not rendered obvious by Zizzo in view of Comeau. Continuing with the response to the rejection of Claim 10, the Applicants present the following arguments.

Zizzo Does not Teach or Suggest Generating a Data Sheet for a Circuit Comprising
User Selected Modules

The rejection asserts that Zizzo teaches generation of “a data sheet for a circuit comprising said user selected modules as positioned in said graphical user interface.” Applicants respectfully assert that Zizzo fails to teach or suggest this claimed limitation. Claimed embodiments of the present invention are directed toward a data sheet for a circuit that comprises user-selected modules as positioned in the GUI. In contrast, what Zizzo teaches in paragraph [0031] is more akin to a data sheet for individual modules, as opposed to the circuit that is formed by placing the modules into a particular configuration in the GUI.

Referring to paragraph [0031] of Zizzo, Zizzo discloses that data sheets may be available for the electronic components. However, Zizzo fails to teach or suggest the generation of a data sheet for the circuit that the user constructs. For example, Zizzo fails to teach or suggest the generation of a data sheet for a circuit constructed with the electronic components. Thus, Zizzo fails to teach or suggest generation of a data sheet for a circuit comprising said selected modules as positioned in said graphical user interface, as claimed.

The Combination of Zizzo and Comeau Fails to Teach or Suggest Generating a Data Sheet for a Circuit Comprising User Selected Modules

Comeau fails to teach or suggest, "generation of a data sheet for a circuit comprising said selected modules as positioned in said graphical user interface," as claimed.

Therefore, Zizzo and Comeau fail to teach or suggest this claimed limitation, alone or in combination.

The Combination of Zizzo and Comeau Fails to Teach or Suggest Generating An Application Programming Interface (API) for Programming An Operation Of A Selected Module

Next, Applicants respectfully assert that Zizzo and Comeau, alone or in combination, fail to teach or suggest the claimed limitation of "generating an application programming interface (API) for programming an operation of a first of said selected modules." The rejection concedes that Zizzo fails to disclose this limitation. Moreover, Applicants respectfully submit that Zizzo fails to teach or suggest this limitation. Comeau also fails to disclose or suggest this limitation.

In support of the rejection, the rejection cites Comeau at paragraph [0043]. The Office Action asserts on page 4 that Comeau recites an apparatus that supports processors executing interpreted language applications that make use of an API. While Comeau may disclose the use of an API, Comeau does not teach or suggest the generation of APIs, as claimed. Thus, Applicants respectfully submit that even if Comeau were to be combined with Zizzo, the combination fails to teach or suggest "generating an application programming interface (API) for programming an operation of a first of said selected modules," as claimed.

The Combination of Zizzo and Comeau Fails to Teach or Suggest Generating An
Interrupt Vector Table Having A Call To An Interrupt Service Routine for a Selected
Module

Next, Applicants respectfully assert that Zizzo and Comeau, alone or in combination, fail to teach or suggest the claimed limitation of “generating an interrupt vector table having a call to an interrupt service routine for a first of said selected modules.” The rejection concedes that Zizzo fails to disclose this limitation. Moreover, Applicants respectfully submit that Zizzo fails to teach or suggest this limitation. Comeau also fails to disclose or suggest this limitation.

In support of the rejection to the presently discussed limitation, the Office Action asserts that Comeau makes use of interrupt vector tables and routines. However, the Office Action fails to assert that Comeau generates such items. Applicants note that Comeau discloses an interrupt vector table. However, Comeau fails to teach or suggest “generating an interrupt vector table having a call to an interrupt service routine for a first of said selected modules,” as claimed. Thus, Applicants respectfully submit that even if Comeau were to be combined with Zizzo, the combination fails to teach or suggest, “generating an interrupt vector table having a call to an interrupt service routine for a first of said selected modules,” as claimed.

For the foregoing reason, at best Zizzo and Comeau teach or suggest generating one of the items that Claim 10 recites as being generated. Thus, Zizzo and Comeau, alone or in combination, fail to teach or suggest generating at least two elements selected from the group. Hence, Claim 10 is not rendered obvious by Zizzo in view of Comeau. As such, Applicants earnestly request allowance of Claim 10.

Claims 11-16 depend from Claim 10, which is believed to be allowable for the foregoing reasons. As such, it is respectfully submitted that Claims 11-16 are not rendered obvious by Zizzo in view of Comeau. As such, allowance of Claims 11-16 is respectfully solicited.

Claims 2 and 29

For the reasons discussed in the response to Claim 1, Claim 1 is neither taught nor suggested by Zizzo. Comeau fails to remedy this deficiency in Zizzo. Therefore, neither Zizzo nor Comeau, alone or in combination, teach or suggest the claimed limitation of Claim 1. As Claim 2 depends from Claim 1, it is respectfully submitted that Claim 2 is neither taught nor suggested by Zizzo nor Comeau, alone or in combination. Therefore, allowance of Claim 2 is earnestly solicited.

For the reasons discussed in the response to Claim 1, Claim 28 is neither taught nor suggested by Zizzo. Comeau fails to remedy this deficiency in Zizzo. Therefore, neither Zizzo nor Comeau, alone or in combination, teach or suggest the claimed limitation of Claim 28. As Claim 29 depends from Claim 28, it is respectfully submitted that Claim 29 is neither taught nor suggested by Zizzo nor Comeau, alone or in combination. Therefore, allowance of Claim 29 is earnestly solicited.

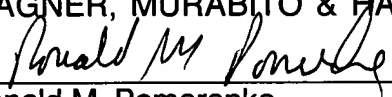
CONCLUSION

In light of the above listed amendments and remarks, reconsideration of the rejected Claims is requested. Based on the arguments and amendments presented above, it is respectfully submitted that Claims 1-16 and 27-37 overcome the rejections of record and, therefore, allowance of Claims 1-16 and 27-37 is earnestly solicited.

Should the Examiner have a question regarding the instant response, the Applicants invite the Examiner to contact the Applicants' undersigned representative at the below listed telephone number.

Dated: 12/22, 2003

Respectfully submitted,
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